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# **Appendix G-2**

## Site Operations and Truck Routing Plan



## TECHNICAL MEMORANDUM

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**To:** Brian Bargemann, Investment Building Group  
**From:** Sabita Tewani, AICP, PTP, Senior Transportation Planner  
Tyler Mathews, Transportation Planner  
**Subject:** Site Operations and Truck Routing Plan for Willow Avenue and Valley Boulevard  
Warehouses, Rialto  
**Date:** January 7, 2025  
**cc:** Dennis Pascua, Transportation Services Manager  
**Attachments:** Figures 1 – 4  
Traffic Scoping Form (with figures illustrating Project Trip Distribution and Assignment)

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The following memorandum provides a Site Operations and Truck Routing Plan (Plan) for the proposed Valley Avenue and Willow Boulevard Warehouses (proposed project), located on the northeast corner of the intersection of Willow Avenue and Valley Boulevard in the City of Rialto (City). The project site is bounded by Valley Boulevard with adjacent industrial and auto equipment, repair and parts stores across the street to the south, Willow Avenue to the west, and the Rialto Channel to the north and east. Regional access to the project area is provided by Interstate (I)-10 south of the project site, I-15 west of the site, and I-215 east of the site. Local access is provided by Valley Boulevard which connects to I-10 freeway interchanges at Riverside Avenue and Cedar Avenue. Figure 1 illustrates the project's location.

The purpose of this Plan is to minimize impacts and protect the public health, safety, and welfare of neighboring residential, educational, and public space. Furthermore, the Plan seeks to control the flow of truck traffic generated by the project to not disrupt local roadways or neighboring public spaces, including Joe Baca Middle School and Ruth Grimes Elementary School to the west, Rialto City Park to the north, and the Colton Golf Course to the east. This Plan has been prepared consistent with requirements as outlined in the City of Rialto Municipal Code Section 18.112.050B(2), Site Operations and Truck Routing Plan.

## 1.0 Project Description and Site Operations

The project would include construction of two warehouse buildings of approximately 72,951 square feet (SF), (inclusive of 6,400 SF of mezzanine/office spaces), and 46,758 SF (inclusive of 3,200 SF of mezzanine/office spaces) located on the northeast corner of the intersection of Willow Avenue and Valley Boulevard. The proposed

project would demolish and replace an existing 33,000 SF warehouse building and would therefore result in construction of 86,709 SF net new warehouse uses on the existing site.

The proposed project would be accessed via four driveways: three driveways on the western portion of the site on Willow Avenue, and one driveway on the southern portion of the site on Valley Boulevard. The three driveways on Willow Avenue would serve passenger vehicles and trucks and would provide full access, and the Valley Boulevard driveway would only serve passenger vehicles. The project would provide a total of 111 passenger car parking stalls and 15 high dock door parking stalls. The project would provide for adequate parking per City's Municipal code. The site plan of the proposed project which includes a detailed parking summary is shown in Figure 2.

The project will operate as a general commercial goods or food products storage warehouse, and it is likely that each building will have a separate tenant. The tenants are unknown at this time but will be expected to operate under standard warehouse operations, such as receiving, sorting, and shipping goods. These operations will occur at designated locations and are not to flow into other locations not appropriate for said operations.

The site is expected to have employees on-site 24 hours a day, seven days each week, with most operations occurring on weekdays between 7:00 a.m. to 6:00 p.m. with minimal weekend activity. While the exact number of employees is not known, it can be estimated using the Southern California Association of Governments (SCAG) employee density factors. SCAG reports that on average, for every 1,195 SF of warehouse space, the number of jobs supported is one employee. Thus, the proposed project is estimated to conservatively have a total of approximately 100 employees, though not all employees are expected to be on-site at the same time.

## 2.0 Existing Transportation Facilities

The City of Rialto follows the roadway classification system included in General Plan Circulation chapter. The following roadways are in the vicinity of the project site:

**Valley Boulevard** is classified as a Major Arterial in the City and in the vicinity of the proposed project. Valley Boulevard, near Willow Avenue, is constructed with two travel lanes in each direction with a center turn lane. Parking is not allowed along this roadway and there are no designated bike facilities, but there are paved, continuous sidewalks along the north side of the roadway, and paved, discontinuous sidewalks on the south side of the roadway. The posted speed limit in the project vicinity is 40 miles per hour (MPH).

**Willow Avenue** is an undivided (i.e., no median), north-south Collector Street with one travel lane in each direction. Collector Streets serve as a transition between Local Streets and arterial roadways. On-street parking is allowed along Willow Avenue. There are paved sidewalks on both sides of Willow Avenue. There is no posted speed limit on Willow Avenue in the project vicinity. The signalized intersection of Willow Avenue/Valley Boulevard would provide access to project traffic from Valley Boulevard.

Omnitrans provides public transportation throughout the San Bernardino Valley and would serve as the nearest transit service to the proposed project. The nearest Omnitrans bus stop serves Route 22, is located approximately

200 feet north of the intersection of Riverside Avenue/Valley Boulevard. Route 22 serves north and south Rialto via Riverside Avenue with a frequency of 60 minutes throughout the week.

There are no existing bicycle facilities adjacent to the proposed project along Valley Boulevard or Riverside Avenue. Per Rialto Active Transportation Plan (March 2020), the proposed facilities in the vicinity of the project include Class II/III facilities along Riverside Avenue; Class II Bike lanes along Valley Boulevard and San Bernadino Avenue and Class III bike route along Willow Avenue, within the City limits.

## 3.0 Project Trip Generation and Truck Routing Plan

### Project Trip Generation and Screening Analysis

The project's Screening Analysis and Traffic Scoping Form prepared by Dudek (March 2022) included project's trip generation and a discussion of the project screening-out from the preparation of detailed level of service (LOS) and vehicle miles traveled (VMT) analyses. The Traffic Scoping Form is provided as an attachment. The Traffic Scoping Form uses the previous version of the site plan, however, the trip generation estimated is conservative because the project size has been reduced compared to the previous version and therefore, the proposed project would generate slightly fewer trips. Under the previous site plan (a slightly larger project), the proposed project would generate approximately 152 net new daily trips, with 15 net new trips (12 inbound and 3 outbound) in the AM peak hour, and 16 net new trips (4 inbound and 12 outbound) in the PM peak hour. Adjusting for passenger car equivalents (PCE), the trip generation is approximately 255 net new daily PCE trips, 23 net new AM PCE peak hour trips (18 inbound and 5 outbound) and 24 net new PM PCE peak hour trips (10 inbound and 14 outbound).

Figures showing the project's trip distribution percentages and the project's trip assignment for AM and PM peak hour trips for workers and trucks are shown in Figures 1, 2A and 2B (in the Traffic Scoping Form).

### Truck Trips and Truck Routing Plan

The proposed project is expected to generate approximately 43 total daily truck trips from 4+ axle (heavy, tractor trailer) trucks, with four (4) truck trips during the AM peak hour, and four (4) truck trips during the PM peak hour. It is estimated that a majority of the heavy truck distribution will use Riverside Avenue, at the I-10/Riverside Avenue interchange, with a split of 60% of the heavy trucks heading westbound, and 40% of the heavy trucks heading eastbound on I-10.

In 2022, the City conducted a truck route study to analyze the existing truck routes, evaluate new truck routes, and utilize city policies including current state and local truck regulations that are consistent with the California Vehicle Code (CVC), to provide recommended truck routes. Based on City of Rialto 2022 Citywide Truck Routing Study (November 2022) the City's Decommissioned and Final Truck Routes are shown in Figure 3. Near the proposed project, Valley Boulevard within the City's boundary and Riverside Avenue, south of Valley Boulevard are designated truck routes. The trucks will utilize the City-designated truck route on Valley Boulevard and Riverside Avenue. The Riverside Avenue and I-10 interchange. Majority of project's truck traffic will utilize I-10 to access the site. Inbound and outbound trucks will enter and exit the site via driveways on Willow Avenue. Trucks that are destined to the east and west will utilize the I-10/Riverside Avenue interchange via Valley Boulevard and Riverside Avenue. Trucks

will not need to pass through any local streets. By remaining on the designated truck route and utilizing I-10, heavy trucks will avoid passing by the nearby public spaces of Joe Baca Middle School, Ruth Grimes Elementary School, Rialto City Park, and Colton Golf Course.

Figure 4 illustrates the Project's Truck Routes for the proposed project's heavy trucks, which will be expected to follow when entering and exiting the site, minimizing the amount of interaction with the nearby public spaces.

## 4.0 Physical and Operational Measures

The proposed project would generate nominal worker and truck trips (18 inbound and 5 outbound PCE trips in the AM peak hour and 10 inbound and 14 outbound PCE trips in the PM peak hour) during the peak hours and on an hourly basis throughout the day, which would be distributed at the four project driveways (see Figures 1, 2A and 2B in the Traffic Scoping Form). Due to low through traffic along Willow Avenue between San Bernardino Avenue and Valley Boulevard (i.e., 4,580 average daily trips with 1.6% heavy trucks per City of Rialto 2022 Citywide Truck Routing Study), and nominal truck trips at project driveways, the proposed project would not have the potential to result in on-site or off-site truck queues.

Although the proposed project would not generate a significant number of truck trips, the following measures will be implemented to prevent truck queuing, stopping, and parking on public streets.

### Physical Measures

The site will provide adequate loading docks and driveway space such that on-site space is provided per City Municipal Code and requirements of the fire code. Off-site parking will not be needed as trucks shall be expected to park in the designated area near each building within the site during operational hours and use the nearest driveway to enter or exit the project site.

### Operational Measures

The project shall provide an on-site parking management monitor (tenant employee or on-site security guard) to ensure that truck queuing and parking operations are efficient, kept on-site, and would not impact vehicular through movements on Valley Boulevard and Willow Avenue. Furthermore, the monitor will coordinate with other parties to ensure that the operations of the warehouses are contained on site and do not emerge on to surrounding public streets, or block parking spaces or driveways, that may hinder the operation or circulation of trucks.

## 5.0 Conclusions

Based on the project's operational characteristics and truck routing plan discussed above, the heavy truck traffic generated by the proposed project would use the City's truck routes and would not disrupt local roadways or neighboring public spaces.

## 6.0 References

City of Rialto. Code of Ordinances accessed at [https://library.municode.com/ca/rialto/codes/code\\_of\\_ordinances](https://library.municode.com/ca/rialto/codes/code_of_ordinances)

City of Rialto. 2021. Traffic Impact Analysis Preparation Guide for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment. October 2021.

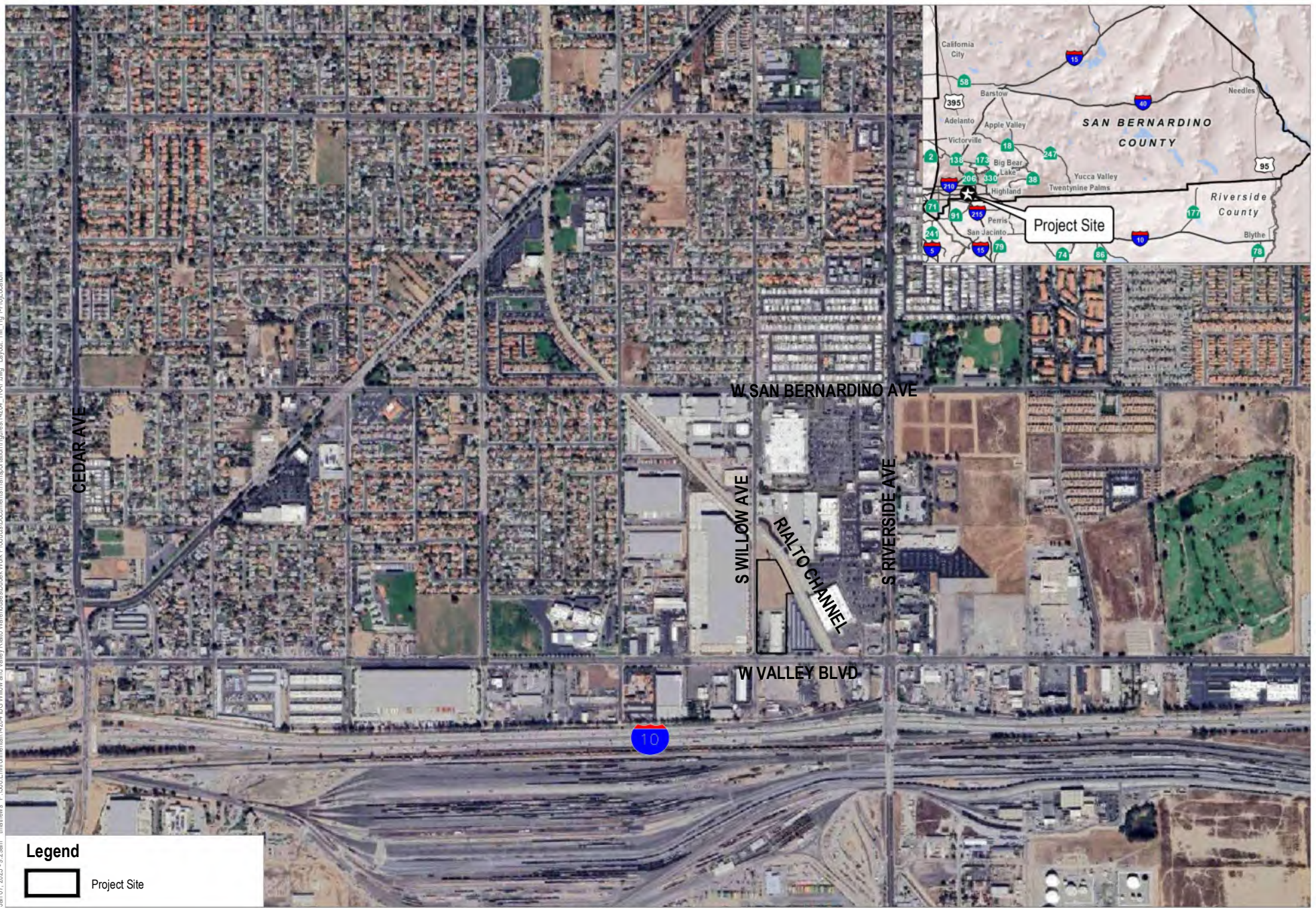
City of Rialto. 2022. City of Rialto 2022 Citywide Truck Routing Study. November 2022

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## **Attachments**

Figures 1-4  
Traffic Scoping Form  
(with figures illustrating Project Trip Distribution and  
Assignment)

Jan 07, 2025 - 9:28am mathews P:\300\Environmental\4204 IBG Willow and Valley Rialto Warehouse\Drawings\Products\Documents\Transportation\Figures\4204\_TRAF.dwg Layout: TM, Fig 1: Proj location



SOURCE: Google Earth, 2024

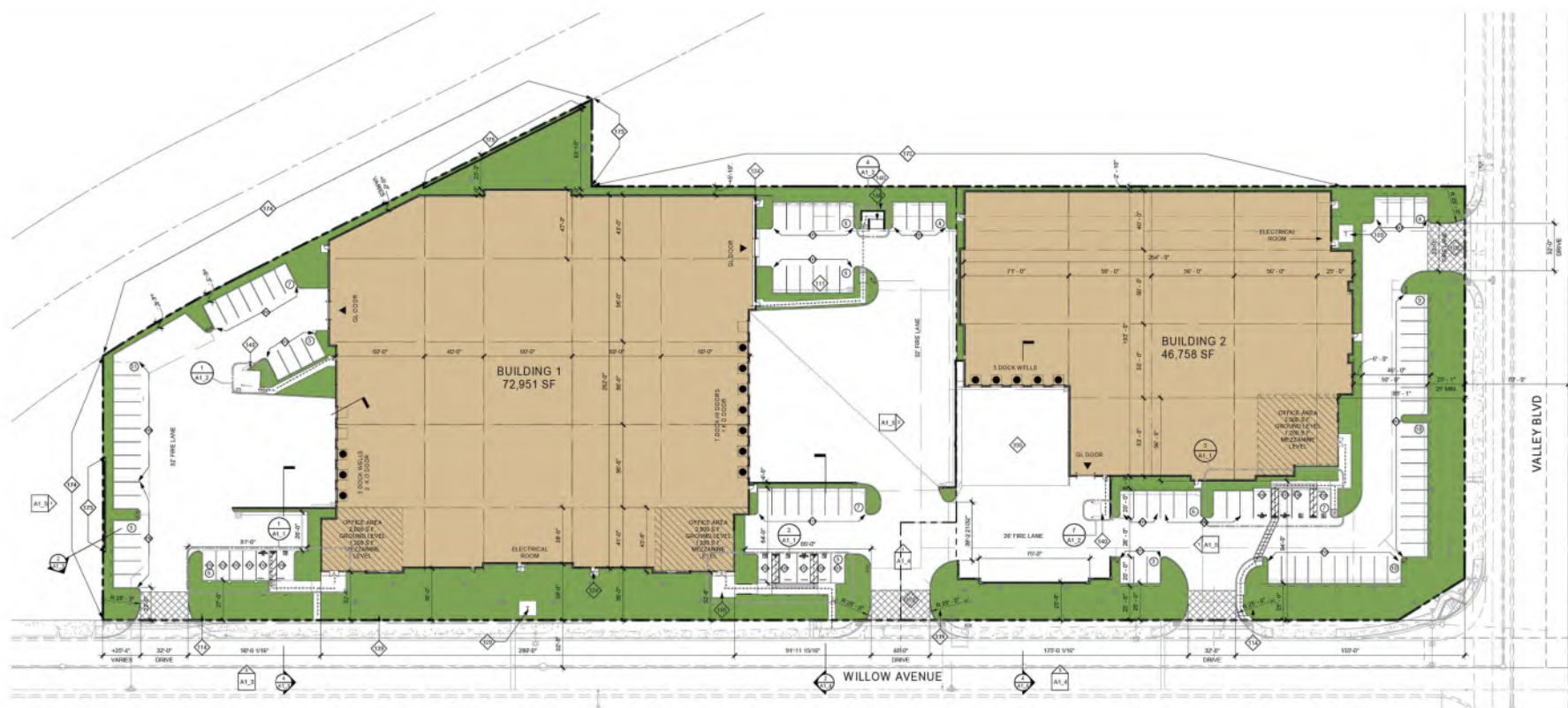






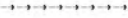



NOT TO SCALE

Figure 1  
Project Location

IBG Willow and Valley Rialto Warehouses Project

Jan 03, 2025 - 3:23pm mathews P:\300\Environmental\4204 IBG Willow and Valley Rialto Warehouse\Drawings\Products\Documents\Transportation\Figures\4204\_TRAF.dwg Layout: TM, Fig 2, Site Plan

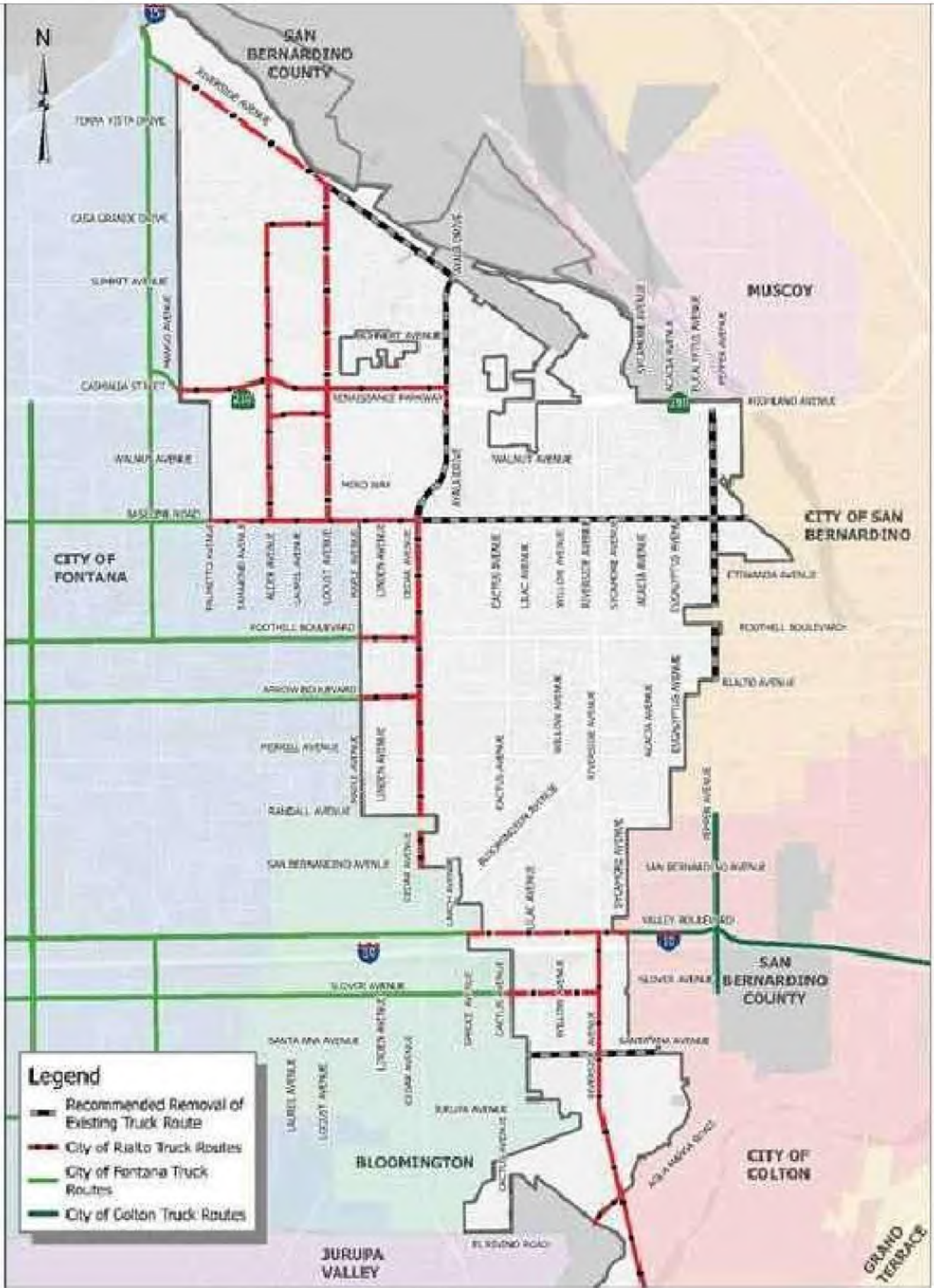


| SITE LEGEND   |  |
|---|--|
|   | LANDSCAPE AREA   |
|  | CONCRETE PAVING. SEE CIVIL DRAWINGS FOR PAVING SECTIONS                      |
|  | FIRE HYDRANT. PROVIDE PIPE BOLLARD PROTECTION POSTS AS REQUIRED. SEE 3/AD1.1 |
|  | STREET LIGHT   |
|  | INDICATES AN ACCESSIBLE ROUTE. MUST COMPLY w/ SITE PLAN GENERAL NOTE #6      |
|  | PROPERTY LINE  |
|  | DOCK HIGH DOOR   |
|  | DRIVE THRU. DOOR   |

SOURCE: HERDMAN ARCHITECTURE + DESIGN, 2024

**Figure 2**  
**Site Plan**

Jan 06, 2025 9:57am mathews P:\300 Environmental\4204 IBC Willow and Valley Rialto Warehouses\DUdek\Work Products\Documents\Transportation\Figures\4204\_TRAF\_dwg\_Layout.TM Fig 3 City of Rialto Truck Routes



SOURCE: City of Rialto, 2022

Figure 3  
City of Rialto Truck Routes

Jan 07, 2025 - 9:34am mathews P:\300\Environmental\4204 IBG Willow and Valley Rialto Warehouse\DUDEK Work Products\Documents\Transportation\Figures\4204\_TRAF.dwg Layout: TM, Fig 4-Project's Truck Route



**Legend**

- Project Site
- Truck Route

SOURCE: Google Earth, 2024

**Figure 4**  
Project's Truck Route  
IBG Willow and Valley Rialto Warehouses Project



## Exhibit A

### SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This following form shall be used to acknowledge preliminary approval of the scope for the traffic impact analysis (TIA) of the following project. The TIA must follow the City of Rialto Traffic Impact Analysis – Report Guidelines and Requirements, adopted by the City Council on \_\_\_\_\_.

**City of Rialto**  
**Traffic Impact Analysis**  
**Scoping Agreement**

Case No. \_\_\_\_\_

Related Cases -

SP No. \_\_\_\_\_

EIR No. \_\_\_\_\_

GPA No. \_\_\_\_\_

ZC No. \_\_\_\_\_

Project Name: Willow and Valley Warehouses

Project Address: 280 W Valley Boulevard, Rialto, CA 92376

Project Description: Approx. 88,902 sq ft net new warehouses to replace an existing 33,000 sq ft warehouse.

|            | <u>Consultant</u>                            | <u>Developer</u>                 |
|------------|--|----------------------------------|
| Name:      | <u>Dudek</u>                                 | <u>Brian Bargemann</u>           |
| Address:   | <u>605 Third Street, Encinitas, CA 92024</u> | <u>Investment Building Group</u> |
| Telephone: | <u>760-479-4109</u>                          | <u>949-263-1111</u>              |
| Fax:       | <u></u>                                      | <u></u>                          |





**5. Study Roadway Segments:** (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

- |          |           |
|----------|-----------|
| 1. _____ | 6. _____  |
| 2. _____ | 7. _____  |
| 3. _____ | 8. _____  |
| 4. _____ | 9. _____  |
| 5. _____ | 10. _____ |

**6. Other Jurisdictional Impacts**

Is this project within any other Agency's Sphere of Influence or within one-mile of another jurisdictional boundary?

- YES
- NO

If so, name of Jurisdiction: \_\_\_\_\_

**7. Site Plan** (please attach 11" x 17" legible copy)

**8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)** (to be filled out by the City of Rialto Public Works Department) (NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing un-signalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

**9. Existing Conditions**

Traffic count data must be new or within one year. Provide traffic count dates if using other than new counts.

Date of counts: No traffic analysis or traffic count data collection is proposed.

**NOTE Fees are due and must be submitted with, or prior to submittal of this form. The City will not process the Scoping Agreement prior to the receipt of the processing fee.**

Fees Paid: \_\_\_\_\_ Date 03/24/2022



**Recommended:**

Scoping Agreement Submittal date 03/24/2022

Scoping Agreement Resubmittal date \_\_\_\_\_

Sabita Tewani, AICP

03/24/2022

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Applicant/Engineer

Date

**Land Use Concurrence:**

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Development Services Department

Date

**Approved by:**

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Public Works Department

Date

**NOTE:**

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval.



## VMT Analysis Project Scoping Form

This scoping form shall be submitted to the City of Rialto to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

### Project Identification:

|                       |  |
|-----------------------|--|
| Case Number:          |  |
| Related Cases:        |  |
| SP No.                |  |
| EIR No.               |  |
| GPA No.               |  |
| CZ No.                |  |
| Project Name:         | Willow and Valley Warehouses   |
| Project Address:      | 280 W Valley Boulevard, Rialto, CA 92376   |
| Project Opening Year: | 2024   |
| Project Description:  | The project would construct net new 88,902 sq ft warehouse, by replacing an 33,000 sq ft warehouse building by constructing two warehouse buildings that total approx. 121,902 sq ft.<br>See attached site plan. |

|            | <b>Consultant:</b>                  | <b>Developer:</b>         |
|------------|-------------------------------------|---------------------------|
| Name:      | Dudek                               | Brian Bargemann           |
| Address:   | 605 Third Street Encinitas CA 92024 | Investment Building Group |
| Telephone: |                                     | 949-263-1111              |
| Fax/Email: |                                     |                           |

### Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual 11th Edition, 2021

Current General Plan Land Use:  
Freeway Commercial

Proposed General Plan Land Use:  
Freeway Commercial

Current Zoning:  
Gateway Specific Plan

Proposed Zoning:  
Gateway Specific Plan



|          | Existing Trip Generation |     |       | Proposed Trip Generation |     |       |
|----------|--------------------------|-----|-------|--------------------------|-----|-------|
|          | In                       | Out | Total | In                       | Out | Total |
| AM Trips | 9                        | 3   | 12    | 27                       | 8   | 35    |
| PM Trips | 1                        | 11  | 12    | 11                       | 25  | 36    |

Trip Internalization:  Yes  No (\_\_\_\_\_% Trip Discount)  
 Pass-By Allowance:  Yes  No (\_\_\_\_\_% Trip Discount)

## Potential Screening Checks

**Is the project screened from VMT assessment?**  Yes  No

### VMT screening justification

Per Office of Planning Research Technical Advisory (December 2018) and City of Rialto's Transportation Analysis Guidelines, if a project generates less than 110 daily trips (from passenger vehicles), it can be screened out from conducting a VMT analysis, using the Small Project Screening criteria. Using the ITE Trip Manual, 11th Edition, as shown in Table 1, the project would generate 91 net new passenger vehicle trips, therefore can be screened out using the Small Project Screening criteria.

## VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used None
- Attach SBCTA Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)



**Approved by:**

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Public Works Department

Date

**NOTE:**

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval



**A** CONCEPTUAL SITE PLAN  
SCALE: 1" = 40'

| PROJECT INFORMATION - SCHEME 11 |   | 12.28.2021 |  | BUILDING 1                      |           | BUILDING 2                      |           |
|---------------------------------|---|------------|--|---------------------------------|-----------|---------------------------------|-----------|
| NET SITE AREA                   | 762,157 SF                              | 8.02 AC    |  | BUILDING AREA                   | 75,109 SF | BUILDING AREA                   | 46,793 SF |
| NET FAR                         | 46.5%                                   |            |  | FOOTPRINT                       | 72,709 SF | FOOTPRINT                       | 45,503 SF |
| MAX FAR                         | N/A                                     |            |  | WAREHOUSE                       | 68,729 SF | WAREHOUSE                       | 43,593 SF |
|                                 | 4,000                                   |            |  | OFFICE                          | 2,400 SF  | OFFICE                          | 2,000 SF  |
| SPECIFIC PLAN                   | GATEWAY SPECIFIC PLAN                   |            |  | MEZZANINE                       | 2,400 SF  | MEZZANINE                       | 1,200 SF  |
| ZONE                            | F.C. (FREEWAY COMMERCIAL)               |            |  | OFFICE                          | 2,400 SF  | OFFICE                          | 1,200 SF  |
| STREET SETBACK                  | 25' "                                   |            |  | PARKING REQUIRED                | 63        | PARKING REQUIRED                | 38        |
| REAR SETBACK                    | 0'                                      |            |  | WAREHOUSE @ 1/1,000 <10K SF     | 30        | WAREHOUSE @ 1/1,000 <10K SF     | 30        |
|                                 | *SETBACK @ 1' PER 1' OF BUILDING HEIGHT |            |  | WAREHOUSE @ 1/2,000 >10K SF     | 30        | WAREHOUSE @ 1/2,000 >10K SF     | 17        |
| CONSTRUCTION TYPE               | III-B                                   |            |  | GROUND FLOOR OFFICE @ 1/250     | 16        | GROUND FLOOR OFFICE @ 1/250     | 8         |
| ALLOWED MAX HEIGHT              | 35'                                     |            |  | NON-GROUND FLOOR OFFICE @ 1/500 | 5         | NON-GROUND FLOOR OFFICE @ 1/500 | 3         |
| LANDSCAPE REQUIRED              | 10%                                     | 29,216 SF  |  | PARKING PROVIDED                | 37        | PARKING PROVIDED                | 49        |
| LANDSCAPE PROVIDED              | 20.0%                                   | 54,139 SF  |  | STANDARD                        | 56        | STANDARD                        | 39        |
|                                 |   |            |  | VAN ADA                         | 2         | VAN ADA                         | 1         |
|                                 |   |            |  | STND ADA                        | 7         | STND ADA                        | 2         |
|                                 |   |            |  | VAN EVCS                        | 3         | VAN EVCS                        | 1         |
|                                 |   |            |  | STND EVCS                       | 0         | STND EVCS                       | 0         |
|                                 |   |            |  | EVCS                            | 3         | EVCS                            | 1         |
|                                 |   |            |  | CLEAR AIR                       | 3         | CLEAR AIR                       | 3         |



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info@Herdman-ad.com

A21-2181  
12.28.2021



Table 1 - Net Trip Generation for Willow and Valley Warehouse, Rialto

| Land Use                                       | ITE Code | Size/Units                    | Daily | AM Peak Hour |           |          | PM Peak Hour |           |           |           |
|--|----------|-------------------------------|-------|--------------|-----------|----------|--------------|-----------|-----------|-----------|
|  |          |                               |       | In           | Out       | Total    | In           | Out       | Total     |           |
| <b>TRIP RATES<sup>1</sup></b>                  |          |                               |       |              |           |          |              |           |           |           |
| Warehousing                                    | 150      | TSF                           | 1.71  | 0.13         | 0.04      | 0.17     | 0.05         | 0.13      | 0.18      |           |
| <b>TRIP GENERATION</b>                         |          |                               |       |              |           |          |              |           |           |           |
| Proposed Warehouse                             | 150      | 121.902 TSF                   | 208   | 16           | 5         | 21       | 6            | 16        | 22        |           |
| Existing Warehouse                             | 150      | 33.000 TSF                    | 56    | 4            | 2         | 6        | 2            | 4         | 6         |           |
| Net New Warehouse                              | 150      | 88.902 TSF                    | 152   | 12           | 3         | 15       | 4            | 12        | 16        |           |
| <b>NET NEW PROJECT TRIP GENERATION</b>         |          |                               |       |              |           |          |              |           |           |           |
| <b>Vehicle Mix<sup>2</sup></b>                 |          | <b>Percent<sup>2</sup></b>    |       |              |           |          |              |           |           |           |
| Passenger Vehicles                             |          | 60.0%                         |       | 91           | 7         | 2        | 9            | 3         | 7         | 10        |
| Trucks   |          | 40.0%                         |       | 61           | 4         | 1        | 5            | 2         | 3         | 5         |
| 2-Axle Trucks                                  |          | 0.8%                          |       | 1            | 0         | 0        | 0            | 0         | 0         | 0         |
| 3-Axle Trucks                                  |          | 11.2%                         |       | 17           | 1         | 0        | 2            | 1         | 0         | 2         |
| 4+-Axle Trucks                                 |          | 28.0%                         |       | 43           | 3         | 1        | 4            | 2         | 2         | 4         |
| <b>Net New Project Trip Generation Non-PCE</b> |          |                               |       | <b>152</b>   | <b>12</b> | <b>3</b> | <b>15</b>    | <b>4</b>  | <b>12</b> | <b>16</b> |
|  |          | <b>PCE Factor<sup>3</sup></b> |       |              |           |          |              |           |           |           |
| Passenger Vehicles                             |          | 1.0                           |       | 91           | 7         | 2        | 10           | 3         | 7         | 10        |
| 2-Axle Trucks                                  |          | 1.5                           |       | 2            | 0         | 0        | 0            | 0         | 0         | 0         |
| 3-Axle Trucks                                  |          | 2.0                           |       | 34           | 2         | 0        | 2            | 2         | 0         | 2         |
| 4+-Axle Trucks                                 |          | 3.0                           |       | 128          | 9         | 3        | 12           | 5         | 7         | 12        |
| <b>Net New Project Trip Generation Non-PCE</b> |          |                               |       | <b>255</b>   | <b>18</b> | <b>5</b> | <b>23</b>    | <b>10</b> | <b>14</b> | <b>24</b> |

Notes: TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

<sup>1</sup>Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition, 2021*.

<sup>2</sup> Per City of Rialto's TIA Guidelines (October 2021), 40% of the daily trips are truck trips (per AQMD staff recommendation included in CalEEMod v. 2013.2 Appendix E Technical Source Documentation, Fleet Mix) for warehousing uses i.e. ITE Code 150. The vehicle mix for trucks i.e. 2-axle, 3-axle, and 4+ axle trucks are per current measured rates in the City and provided in the draft TIA guidelines.

<sup>3</sup> Passenger Car Equivalent (PCE) factors are assumed to be 1.0 for passenger vehicles, 1.5 and 2.0 for 2-axle and 3-axle trucks, and 3.0 for 4-axle trucks per City of Rialto TIA Guidelines (October 2021)

Table 2 - Total Trip Generation for Willow and Valley Warehouses, Rialto

| Land Use                               | ITE Code       | Size/Units                    | Daily      | AM Peak Hour |          |           | PM Peak Hour |           |           |
|--|----------------|-------------------------------|------------|--------------|----------|-----------|--------------|-----------|-----------|
|  |                |                               |            | In           | Out      | Total     | In           | Out       | Total     |
| <b>TRIP RATES<sup>1</sup></b>          |                |                               |            |              |          |           |              |           |           |
| Warehousing                            | 150            | TSF                           | 1.71       | 0.13         | 0.04     | 0.17      | 0.05         | 0.13      | 0.18      |
| <b>TRIP GENERATION</b>                 |                |                               |            |              |          |           |              |           |           |
| Willow and Valley Warehouse            | 150            | 121.902 TSF                   | 208        | 16           | 5        | 21        | 6            | 16        | 22        |
| <b>PROJECT TRIP GENERATION</b>         |                |                               |            |              |          |           |              |           |           |
| <b>Vehicle Mix<sup>2</sup></b>         |                | <b>Percent<sup>2</sup></b>    |            |              |          |           |              |           |           |
| Passenger Vehicles                     |                | 60.0%                         | 125        | 10           | 3        | 13        | 4            | 9         | 13        |
| Trucks                                 |                | 40.0%                         | 83         | 6            | 2        | 8         | 2            | 6         | 8         |
|  | 2-Axle Trucks  | 0.8%                          | 2          | 0            | 0        | 0         | 0            | 0         | 0         |
|  | 3-Axle Trucks  | 11.2%                         | 23         | 1            | 1        | 2         | 1            | 1         | 2         |
|  | 4+-Axle Trucks | 28.0%                         | 58         | 5            | 1        | 6         | 2            | 4         | 6         |
| <b>Project Trip Generation Non-PCE</b> |                |                               | <b>208</b> | <b>16</b>    | <b>5</b> | <b>21</b> | <b>6</b>     | <b>15</b> | <b>21</b> |
|  |                | <b>PCE Factor<sup>3</sup></b> |            |              |          |           |              |           |           |
| Passenger Vehicles                     |                | 1.0                           | 125        | 10           | 3        | 13        | 4            | 9         | 13        |
| 2-Axle Trucks                          |                | 1.5                           | 3          | 0            | 0        | 0         | 0            | 0         | 0         |
| 3-Axle Trucks                          |                | 2.0                           | 47         | 2            | 2        | 4         | 2            | 2         | 4         |
| 4+-Axle Trucks                         |                | 3.0                           | 175        | 15           | 3        | 18        | 5            | 13        | 18        |
| <b>Project Trip Generation W/PCE</b>   |                |                               | <b>349</b> | <b>27</b>    | <b>8</b> | <b>35</b> | <b>11</b>    | <b>25</b> | <b>36</b> |

Notes: TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

<sup>1</sup>Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition, 2021*.

<sup>2</sup> Per City of Rialto's TIA Guidelines (October 2021), 40% of the daily trips are truck trips (per AQMD staff recommendation included in CalEEMod v. 2013.2 Appendix E Technical Source Documentation, Fleet Mix) for warehousing uses i.e. ITE Code 150. The vehicle mix for trucks i.e. 2-axle, 3-axle, and 4+ axle trucks are per current measured rates in the City and provided in the draft TIA guidelines.

<sup>3</sup> Passenger Car Equivalent (PCE) factors are assumed to be 1.0 for passenger vehicles, 1.5 and 2.0 for 2-axle and 3-axle trucks, and 3.0 for 4-axle trucks per City of Rialto TIA Guidelines (October 2021)

Table 3 - Existing Trip Generation for Project Site, Rialto

| Land Use                                | ITE Code       | Size/Units                    | Daily     | AM Peak Hour |          |           | PM Peak Hour |           |           |
|---|----------------|-------------------------------|-----------|--------------|----------|-----------|--------------|-----------|-----------|
|   |                |                               |           | In           | Out      | Total     | In           | Out       | Total     |
| <b>TRIP RATES<sup>1</sup></b>           |                |                               |           |              |          |           |              |           |           |
| Warehousing                             | 150            | TSF                           | 1.71      | 0.13         | 0.04     | 0.17      | 0.05         | 0.13      | 0.18      |
| <b>TRIP GENERATION</b>                  |                |                               |           |              |          |           |              |           |           |
| Existing Warehouse                      | 150            | 33,000 TSF                    | 56        | 4            | 2        | 6         | 2            | 4         | 6         |
| <b>PROJECT TRIP GENERATION</b>          |                |                               |           |              |          |           |              |           |           |
| <b>Vehicle Mix<sup>2</sup></b>          |                | <b>Percent<sup>2</sup></b>    |           |              |          |           |              |           |           |
| Passenger Vehicles                      |                | 60.0%                         | 34        | 3            | 1        | 4         | 1            | 3         | 4         |
| Trucks                                  |                | 40.0%                         | 22        | 2            | 1        | 3         | 0            | 3         | 3         |
|   | 2-Axle Trucks  | 0.8%                          | 0         | 0            | 0        | 0         | 0            | 0         | 0         |
|   | 3-Axle Trucks  | 11.2%                         | 6         | 0            | 1        | 1         | 0            | 1         | 1         |
|   | 4+-Axle Trucks | 28.0%                         | 16        | 2            | 0        | 2         | 0            | 2         | 2         |
| <b>Existing Trip Generation Non-PCE</b> |                |                               | <b>56</b> | <b>5</b>     | <b>2</b> | <b>7</b>  | <b>1</b>     | <b>6</b>  | <b>7</b>  |
|   |                | <b>PCE Factor<sup>3</sup></b> |           |              |          |           |              |           |           |
| Passenger Vehicles                      |                | 1.0                           | 34        | 3            | 1        | 3         | 1            | 3         | 4         |
| 2-Axle Trucks                           |                | 99.0                          | 1         | 0            | 0        | 0         | 0            | 0         | 0         |
| 3-Axle Trucks                           |                | 2.0                           | 13        | 0            | 2        | 2         | 0            | 2         | 2         |
| 4+-Axle Trucks                          |                | 3.0                           | 47        | 6            | 0        | 6         | 0            | 6         | 6         |
| <b>Existing Trip Generation Non-PCE</b> |                |                               | <b>95</b> | <b>9</b>     | <b>3</b> | <b>12</b> | <b>1</b>     | <b>11</b> | <b>12</b> |

Notes: TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

<sup>1</sup> Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition, 2021*.

<sup>2</sup> Per City of Rialto's TIA Guidelines (October 2021), 40% of the daily trips are truck trips (per AQMD staff recommendation included in CalEEMod v. 2013.2 Appendix E Technical Source Documentation, Fleet Mix) for warehousing uses i.e. ITE Code 150. The vehicle mix for trucks i.e. 2-axle, 3-axle, and 4+ axle trucks are per current measured rates in the City and provided in the draft TIA guidelines.

<sup>3</sup> Passenger Car Equivalent (PCE) factors are assumed to be 1.0 for passenger vehicles, 1.5 and 2.0 for 2-axle and 3-axle trucks, and 3.0 for 4-axle trucks per City of Rialto TIA Guidelines (October 2021)

of warehouses can be expected to operate at varying levels of service, including some warehouses experiencing temporary partial or complete vacancy.

### ***Fleet Mix***





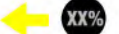
The fleet mix used in the URBEMIS model is derived from the regional average distribution of trips obtained from the EMFAC model. While this fleet mix may be appropriate for the majority of land uses, it may not be appropriate for specialized uses such as warehouses. For example, as reported in the ITE 8<sup>th</sup> Edition Trip Generation manual, truck trips may account for 9 to 29 percent of total trips. Five of the seven studies analyzed here did not report specific truck traffic data, though some generally reported similar rates. The Inland Empire study (#6) found that trucks accounted for 28 to 65 percent of total trips for the ten warehouses in the study, with an average of 48%. The Fontana study (#7) found that trucks make up approximately 20% of total trips for the four warehouses evaluated. This study also broke down the trip distribution among 2, 3, and 4+ axle trucks (3.46%, 4.64%, 12.33%, respectively). In order to avoid underestimating the number of trucks visiting warehouse facilities, AQMD staff recommends that lead agencies conservatively assume that an average of 40% of total trips are truck trips  $[(0.48*10 + 0.2*4)/(10+4)=0.4]$ . Without more project-specific data (such as detailed trip rates based on a known tenant schedule), this average rate of 40% provides a reasonably conservative value based on currently available data.

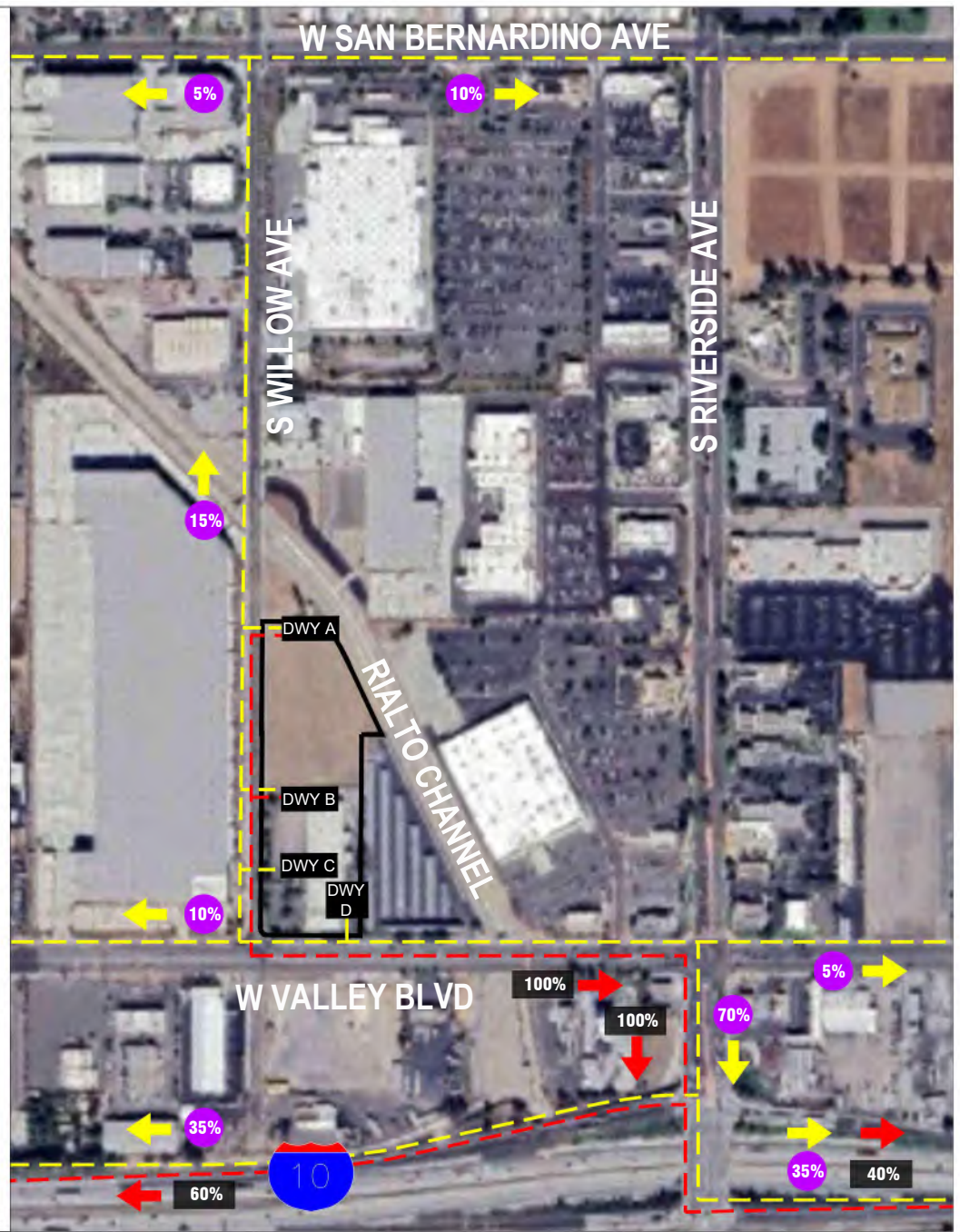
The fleet mix from the Fontana study as quoted above may be used to determine the distribution of truck type. In order to convert the axle based fleet mix to the vehicle classes utilized by EMFAC, one of two methods may be used.

1. 4+ axles=HHDT, 3 axles=MHDT, 2 axles=LHDT1, all others=LDA
2. Caltrans *Transportation Project-Level Carbon Monoxide Protocol* Appendix B (illustrated below).  
 $\%HDGT = 0.50(\%2\text{-axle}) + 0.25(\%3\text{-axle}) + 0.10(\%4\text{ axle})$   
 $\%HDDT = 0.50(\%2\text{-axle}) + 0.75(\%3\text{-axle}) + 0.90(\%4\text{-axle}) + 1.0(\%5\text{-axle})$   
All others=LDA

Jan 07, 2025 - 10:27am browser: P:\302-Environmental\204-IBG-Willow and Valley Rialto Warehouse\Course Work Products\Documents\Transportation\Figure1\1001\_TBPAE.dwg Layout: Fig1\_P1\Fig1.dwg

### LEGEND

-  Project Site
-  Truck Route
-  Trucks Percentage Distribution
-  Passenger Car Route
-  Passenger Cars Percentage Distribution



SOURCE: Google Earth, 2024

**Figure 1**  
**Project Trip Distribution**

| CARS                       | TRUCKS                                      | TOTAL                      |
|----------------------------|---|----------------------------|
| <p><b>A</b> Driveway A</p> | <p><b>A</b> Driveway A</p> <p>No Trucks</p> | <p><b>A</b> Driveway A</p> |
| <p><b>B</b> Driveway B</p> | <p><b>B</b> Driveway B</p>                  | <p><b>B</b> Driveway B</p> |
| <p><b>C</b> Driveway C</p> | <p><b>C</b> Driveway C</p>                  | <p><b>C</b> Driveway C</p> |
| <p><b>D</b> Driveway D</p> | <p><b>D</b> Driveway D</p>                  | <p><b>D</b> Driveway D</p> |



SOURCE: Google Earth, 2024

**Figure 2A**  
Project Trip Assignment- Driveways A, B, C, and D

| CARS   | TRUCKS  | TOTAL  |
|--|---|--|
| <p>1 W San Bernardino Ave/<br/>S Willow Avenue</p> | <p>1 W San Bernardino Ave/<br/>S Willow Avenue</p> <p>No Trucks</p> | <p>1 W San Bernardino Ave/<br/>S Willow Avenue</p> |
| <p>2 W Valley Boulevard/<br/>S Willow Avenue</p>   | <p>2 W Valley Boulevard/<br/>S Willow Avenue</p>                    | <p>2 W Valley Boulevard/<br/>S Willow Avenue</p>   |



SOURCE: Google Earth, 2024

**Figure 2B**  
Project Trip Assignment- Intersections 1 and 2